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PTO/SB/05 (03-01)
Approved for use through 10/31/2002. OMB 0651-0032
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
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|---|------------------------|--|
| UTILITY PATENT APPLICATION TRANSMITTAL <i>(Only for new nonprovisional applications under 37 CFR 1.53(b))</i> | Attorney Docket No. | 062020-1430 |
| | First Inventor | Farrokh Ayazi |
| | Title | PIEZOELECTRIC ON SEMICONDUCTOR-ON-INSULATOR MICROELECTROMECHANICAL RESONATORS AND METHODS OF FABRICATION |
| | Express Mail Label No. | EV269335287IIS |

| | | | |
|---|---|--|--|
| APPLICATION ELEMENTS See MPEP Chapter 600 concerning utility patent application contents | | ADDRESS TO: Mail Stop Patent Application Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450 | |
| <input type="checkbox"/> APPLICANT REQUESTS EARLY PUBLICATION UNDER 37 CFR 1.219 (additional fee) | | | |
| 1. <input checked="" type="checkbox"/> Fee Transmittal Form (e.g., PTO/SB/17) (Submit an original, and a duplicate for fee processing) | 7. <input type="checkbox"/> CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix) | ACCOMPANYING APPLICATION PARTS 9. <input checked="" type="checkbox"/> Assignment Papers (cover sheet & Documents(s)) 10. <input type="checkbox"/> 37 CFR 3.73(b) Statement (when there is an assignee) <input checked="" type="checkbox"/> Power of Attorney 11. <input type="checkbox"/> English Translation Document (if applicable) 12. <input type="checkbox"/> Information Disclosure Statement (IDS)/PTO-1449 <input type="checkbox"/> Copies of IDS Citations 13. <input type="checkbox"/> Preliminary Amendment 14. <input checked="" type="checkbox"/> Return Receipt Postcard (MPEP 503) (Should be specifically itemized) 15. <input type="checkbox"/> Certified Copy of Priority Document(s) (if foreign priority is claimed) 16. <input type="checkbox"/> Nonpublication Request under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent. 17. <input type="checkbox"/> Other: _____ | |
| 2. <input checked="" type="checkbox"/> Applicant claims small entity status. See CFR 1.27 | 8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary) a. <input type="checkbox"/> Computer Readable Copy (CRF) b. Specification Sequence Listing on: i. <input type="checkbox"/> CD-ROM or CD-R (2 copies); or ii. <input type="checkbox"/> Paper c. <input type="checkbox"/> Statements verifying identity of above copies | | |
| 3. <input checked="" type="checkbox"/> Specification (preferred arrangement set forth below) [Total Pages 22] - Descriptive title of the invention - Cross Reference to Related Applications - Statement Regarding Fed. Sponsored R&D - Reference to sequence listing, a table, or a computer program listing appendix - Background of the Invention - Brief Summary of the Invention - Brief Description of the Drawings (if filed) - Detailed Description - Claim(s) - Abstract of the Disclosure | | | |
| 4. <input checked="" type="checkbox"/> Drawing(s) (35 USC 113) [Total Sheets 10] | | | |
| 5. Oath or Declaration [Total Pages 6] a. <input checked="" type="checkbox"/> Newly Executed (original or copy) b. <input type="checkbox"/> Copy from a prior application (37 CFR §1.63(d)) (for continuation/divisional with Box 18 completed) i. <input type="checkbox"/> DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b). | | | |
| 6. <input type="checkbox"/> Application Data Sheet. See 37 CFR 1.76 | | | |
| Assignee Name and Address (if applicable) Georgia Tech Research Corporation 505 Tenth Street, NW, Atlanta, GA 30332-0415 | | | |


18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No: /

Prior application information: Examiner _____

Group / Art Unit: _____

For CONTINUATION OR DIVISIONAL APPS only: the entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. This incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

| | | | |
|---|---|---|-----------------|
| 18. CORRESPONDENCE ADDRESS | | | |
| <input checked="" type="checkbox"/> Customer Number or Bar Code Label 24504 (Insert Customer No. or Attach bar code label here) | | <input type="checkbox"/> Correspondence address below | |
| NAME | Scott A. Horstemeyer Thomas, Kayden, Horstemeyer & Risley, L.L.P. | | |
| ADDRESS | 100 Galleria Parkway Suite 1750 | | |
| CITY | Atlanta | STATE | Georgia |
| COUNTRY | U.S.A. | TELEPHONE | 770-933-9500 |
| | | ZIP CODE | 30339-5948 |
| | | FAX | 770-951-0933 |
| Name (Print/Type) | Scott A. Horstemeyer | Registration No. (Attorney/Agent) | 34,183 |
| Signature |  | Date | 07/31/03 |

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450 DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

17707 U.S. PTO
07/31/03

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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

FEE TRANSMITTAL for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revisions.

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$)**559.00**

Complete If Known

| | |
|----------------------|----------------|
| Application Number | To be assigned |
| Filing Date | July 31, 2003 |
| First Named Inventor | Farrokh Ayazi |
| Examiner Name | To be assigned |
| Group / Art Unit | To be assigned |
| Attorney Docket No. | 062020-1430 |

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ Other ☐ None

☒ Deposit Account

Deposit Account Number

20-0778

Deposit Account Name

Thomas, Kayden, Horstemeyer Risley, L.L.P.

The Commissioner is authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☒ Credit any overpayments
☒ Charge any additional fee(s) during the pendency of this application
☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account

FEE CALCULATION

1. BASIC FILING FEE

| Large Entity Fee Code | Fee (\$) | Small Entity Fee Code | Fee (\$) | Fee Description | Fee Paid |
|--------------------------|----------|--------------------------|----------|------------------------|--------------------|
| 1001 | 750 | 2001 | 375 | Utility Filing Fee | 375.00 |
| 1002 | 330 | 2002 | 165 | Design Filing Fee | |
| 1003 | 520 | 2003 | 260 | Plant Filing Fee | |
| 1004 | 750 | 2004 | 375 | Reissue Filing Fee | |
| 1005 | 160 | 2005 | 80 | Provisional Filing Fee | |
| SUBTOTAL (1) | | | | | (\$) 375.00 |

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

| | Extra Claims | Fee From Below | Fee Paid |
|--------------------|--------------|----------------|-----------------|
| Total Claims | 36 | - 20**= 16 | X 9.00 = 144.00 |
| Independent Claims | 3 | - 3**= 0 | X 42.00 = |
| Multiple Dependent | | | 140.00 = |

| Large Entity | | Small Entity | | <u>Fee Description</u> |
|--------------|----------|--------------|----------|---|
| Fee Code | Fee (\$) | Fee Code | Fee (\$) | |
| 1202 | 18 | 2202 | 9 | Claims in excess of 20 |
| 1201 | 84 | 2201 | 42 | Independent claims in excess of 3 |
| 1203 | 280 | 2203 | 140 | Multiple dependent claim, if not paid |
| 1204 | 84 | 2204 | 42 | **Reissue independent claims over original patent |
| 1205 | 18 | 2205 | 9 | **Reissue claims in excess of 20 and over original patent |
| SUBTOTAL (2) | | | | (\$)<u>144.00</u> |

**or number previously paid, if greater; For Reissues, see above

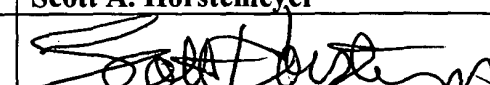
FEES CALCULATION (continued)

3. ADDITIONAL FEES

| Large Entity Fee Code | Fee (\$) | Small Entity Fee Code | Fee (\$) | Fee Description | Fee Paid |
|--------------------------|----------|--------------------------|----------|--|-------------------|
| 1051 | 130 | 2051 | 65 | Surcharge-late filing fee or oath | |
| 1052 | 50 | 2052 | 25 | Surcharge-late provisional filing fee or cover sheet | |
| 1053 | 130 | 1053 | 130 | Non-English specification | |
| 1812 | 2,520 | 1812 | 2,520 | For filing a request for ex parte reexamination | |
| 1804 | 920* | 1804 | 920* | Requesting publication of SIR prior to Examiner action | |
| 1805 | 1,840* | 1805 | 1,840* | Requesting publication of SIR after Examiner action | |
| 1251 | 110 | 2251 | 55 | Extension for reply within first month | |
| 1252 | 410 | 2252 | 205 | Extension for reply within second month | |
| 1253 | 930 | 2253 | 465 | Extension for reply within third month | |
| 1254 | 1,450 | 2254 | 725 | Extension for reply within fourth month | |
| 1255 | 1,970 | 2255 | 985 | Extension for reply within fifth month | |
| 1401 | 320 | 2401 | 160 | Notice of Appeal | |
| 1402 | 320 | 2402 | 160 | Filing a brief in support of an appeal | |
| 1403 | 280 | 2403 | 140 | Request for oral hearing | |
| 1451 | 1,510 | 1451 | 1,510 | Petition to institute a public use proceeding | |
| 1452 | 110 | 2452 | 55 | Petition to revive-unavoidable | |
| 1453 | 1,300 | 2453 | 650 | Petition to revive-unintentional | |
| 1501 | 1,300 | 2501 | 650 | Utility issue fee (or reissue) | |
| 1502 | 470 | 2502 | 235 | Design issue fee | |
| 1503 | 630 | 2503 | 315 | Plant issue fee | |
| 1460 | 130 | 1460 | 130 | Petitions to the Commissioner | |
| 1807 | 50 | 1807 | 50 | Processing fee for provisional application | |
| 1806 | 180 | 1806 | 180 | Submission of Information Disclosure Stmt | |
| 8021 | 40 | 8021 | 40 | Recording each patent assignment per property (times number of properties) | 40.00 |
| 1809 | 750 | 2809 | 375 | Filing a submission after final rejection (37 CFR § 1.129(a)) | |
| 1810 | 750 | 2810 | 375 | For each add. invention to be examined (37 CFR 1.129(b)) | |
| 1801 | 750 | 2801 | 375 | Request for Continued Examination (RCE) | |
| 1802 | 900 | 1802 | 900 | Request for expedited exam. of a design application | |
| Other fee (specify) | | | | | |
| SUBTOTAL (3) | | | | | (\$) 40.00 |

*Reduced by Basic Filing Fee Paid

SUBMITTED BY

| | | | | | |
|-----------------------|---|------------------|----------|------------------|--------------|
| Typed or Printed Name | Scott A. Horstemeyer | Registration No. | 34,183 | Telephone Number | 770-933-9500 |
| Signature |  | Date | 07/31/03 | | |

WARNING: Information on this form may become public. Credit Card Information should not be included on this form. Provide credit card information and authorization on PTO-2038

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 37 USC 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450 DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: **Ayazi, et al.**For: **PIEZOELECTRIC ON SEMICONDUCTOR-ON-INSULATOR
MICROELECTROMECHANICAL RESONATORS AND METHODS OF
FABRICATION****CERTIFICATE OF EXPRESS MAIL**Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

Enclosed for filing in the above case are the following documents:

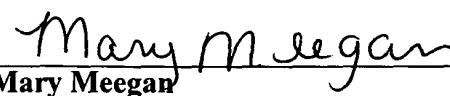
Return Postcard
Utility Patent Application Transmittal Page
Fee Transmittal Page
Utility Patent Application Consisting Of:
16 Pages of Specification
5 Pages of Claims (Claims 1-36)
1 Page of Abstract
10 Pages of Formal Drawings (Figs. 1-6)
Assignment/Assignment Cover Sheet (in duplicate)
Declaration and Power of Attorney (executed)

Further, the Commissioner is authorized to charge Deposit Account No. 20-0778 for any additional fees required. The Commissioner is requested to credit any excess fee paid to Deposit Account No. 20-0778.

Respectfully submitted,

Scott A. Horstemeyer, Reg. No. 34,183

**THOMAS KAYDEN, HORSTEMEYER
& RISLEY, L.L.P.**100 Galleria Parkway, N.W.
Suite 1750
Atlanta, Georgia 30339-5948Our Docket No: **062020-1430**

I hereby certify that all correspondence listed above are being deposited for delivery to the above addressee, with the United States Postal Service "**EXPRESS MAIL POST OFFICE TO ADDRESSEE**" service under 37 CFR §1.10 on the date indicated below:The envelope has been given U.S. Postal Service "Express Mail Post Office To Addressee" Package # **EV269335287US**.Date: 7-31-03
Mary Meegan